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Sensing Facts and Emotions: Intelligent Technology's Redefinition of News Text Presentation

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Abstract: Intelligent technology represented by artificial intelligence has profoundly changed the boundaries and patterns of journalism. Traditional media reports are constrained by conditions such as the shape of the newspaper layout, presenting independent and objective content of individual reports. Intelligent technology has changed this pattern, the presentation of news text will reflect the characteristics of "information layer of basic facts" and "opinion layer of emotional analysis" co-presentation, while adhering to the separation of the facts and opinions of the report itself, the typical attitudes and emotions of the user feedback and the facts of the media report are jointly presented to the public. While maintaining the separation of facts and opinions in the report itself, the typical attitudes and emotions of user feedback are presented to the public together with the facts of the media report. This will present the public with an intuitive and visualized opinion environment through sentiment and text analysis while quickly distilling and summarizing the main facts in the information flood. At the same time, intelligent technology further shortens the time lag between the occurrence of an event and the release of a news report, shortening the time lag and the perception of the importance of time lag in a cyclical manner, shaping the practitioner's view of time lag.

Keywords: intelligent technology, news text, chain tracing, symbolic likeness, emotional presentation.

1. Introduction

The development and application of intelligent technology represented by artificial intelligence has profoundly changed the boundaries and patterns of journalism. In the traditional media era, under the limitations of technology and time and space, the news text is limited in length and can only present key facts. News text and news text independently presented, and due to the limitations of the external material of newspapers and other media, it is difficult to be read by the public for correlation. The news text as a whole is characterized by a single objective presentation. At the same time, the press has always followed the principle of objectivity in news reporting, emphasizing that news reporting should be independent of the reporter's subjective attitude tendency to convey the facts themselves to the public rather than opinions. Journalists can only quote and paraphrase an appropriate amount of the words of news parties and the public in news writing, and construct symbolic reality through the selection, processing and reorganization of symbolic facts, which affects the construction of the

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public's perception of the external world and promotes the formation of social consensus. Thus, news texts suggest to the public the information layer and the potential opinion layer.

However, with the exponential growth of content in cyberspace, users' information processing ability significantly lags behind the surge in the amount of information, which has led to the emergence of problems such as news paranoia, unfocused public opinion, emotional processing, and so on, and the news reports face problems such as low reach rate and difficulty in reaching social consensus. In the traditional media era, a single presentation of news text is more demanding on the public's internal logic, requiring the public to process and digest multiple independent text information to build a holistic perception of society, making it difficult to adapt to the public's fragmented, one-way acceptance without critical thinking and lack of in-depth thinking reading habits under the influence of intelligent communication in the era of information overload. As a result, once news reversal and rumors appear, its guiding ability will be greatly weakened by the repeatedly changing and complicated information and opinion environment. How to help users obtain key facts in the massive information fragments, perceive and rationally participate in the discussion of complex phenomena has become a new issue for the presentation of news texts.

The development of intelligent technology provides new possibilities for the effective presentation of news text. The presentation of news text is characterized by the co-occurrence of "basic facts at the information level" and "emotional analysis at the opinion level". With the help of intelligent technology, the platform provides the media with objective reports on events, and also presents the typical attitude and emotion of user feedback to the public through AI sentiment analysis.

2. Objective narrative: news presentation in traditional media reporting

2.1. The Requirement of Objectivity

The principle of objectivity, as the core of journalistic professionalism, is one of the basic principles of news reporting in traditional media. in the 1920s, objectivity became a basic code of ethics followed by the U.S. journalism industry. The American Society of Newspaper Editors developed the first self-regulatory journalism code in the United States, the Press Statute, which states, "Impartiality-mature journalistic practice-can clearly distinguish between news reporting and the expression of opinion. Journalism should distance itself from opinion or bias of any kind." [1] After this, objectivity became the basic requirement for news reporting in the press and newspaper industry. Journalistic objectivity refers to the characteristic that news reports must be written in an objective narrative to disseminate information, requiring the reporter to "report only facts, not opinions" when dealing with news events, and to "show" only objectively in news dissemination, rather than subjectively. In news dissemination, they only "show" objectively, not "tell" subjectively, and strive to be accurate and reliable. [2] The separation of fact and opinion is a basic requirement for journalistic objectivity, and news reports must describe facts as they are and as they happened, not "according to the wish to describe the facts" [3].

2.2. Textual presentation of single report

Constrained by media materials and communication technology, news reports in the traditional media era are greatly limited in time and space. In terms of timeliness, the publication cycle of newspapers is usually daily or weekly, and the news programs on TV and radio also have a fixed broadcast time, which determines the periodicity of news reports in the traditional media era, and the "effective" time of news reports is relatively long. Therefore, news reports in this period can often be disclosed after fully grasping the facts, and the chronological nature of the news narrative is very prominent. At the same time, because the editing and printing process requires a lot of time for personnel communication and text revision and improvement, news reports are often unable to be conveyed to

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the public in the first time, and the public's demand for the speed of news reporting is also relatively broad. In terms of space, the text presentation of traditional media reports has two characteristics: first, the text itself is characterized by significant regional and local characteristics, and each media outlet decides the target and the radiation scope of the report according to its own positioning; second, the text presentation is characterized by significant streamlining and independence. The space limitations of traditional media are very strict compared with those of online media. In the newspaper, the news text needs to ensure its own length of strict control, according to the importance of the news value to determine the size of the space occupied. Television, radio and other media, the news program time is fixed, the news report must be completed within a limited time, and therefore must ensure that their own length of reasonable control. At the same time, the limited space of the newspaper also makes the news text shows significant independence. News reports are often printed in a single newspaper, and related and similar topics cannot be synchronized for display. Compared with the hyperlinks and hypertexts of Internet communication, the single news text of traditional news media lacks the environment and display space for related issues, and the integration of multiple issues relies more on the public's subjective motivation and information processing ability.

3. Multidimensional co-occurrence: the reconstruction of news text presentation by intelligent technology

Empowered by intelligent technology, the presentation of news text consists of basic facts in the information layer and emotional analysis in the opinion layer. In the traditional media era, the presentation of news text relies on the objective presentation of objective information, emphasizing that the news cannot carry personal subjective tendencies, and the expression of opinions is realized through the matching and screening of detail mining, narrative scenes, phrase attributes, and other people's language paraphrasing, etc. The public needs to perceive the climate of opinions and decide their own attitude tendencies through personal information processing. Intelligent technology makes it possible to summarize opinions and analyze emotions in a high-speed and efficient way. The presentation of news texts can adhere to the narrative tradition of objectivity, truthfulness, comprehensiveness and fairness, supplemented by emotional analysis, and through intelligent processing of existing opinions and attitudes in the cyberspace, it can construct an opinion environment with clearer views and help the public to identify the basic facts and the main attitudes more quickly. The visual narrative of the text assists the public's information recognition and processing with statistical charts, scene simulation and reenactment, and short videos.

3.1. Perceiving facts: chain presentation of basic facts

Media technology has changed users' information reading preference and thinking logic while innovating the form of content expression. With the deep evolution of image technology, the importance of functional rhetoric in describing news events with newsgroup diagrams and links to enhance the narrative effect of news texts and increase the narrative space is highlighted. [4] Intelligent technology realizes the innovative presentation of news text precisely in this aspect. Even the presentation of the same "information layer" news text as in the traditional media era is also characterized by different features with the assistance of intelligent technology. This is mainly reflected in two aspects: one is the factual report of the timeline traceability, and the other is the text of the visualization of the narrative enhancement. Timeline tracing of factual reports effectively integrates news reports of related events, and presents the facts and developments in a chain.

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3.1.1. From single text display to time chain tracing

In the era of traditional media, news reports are conveyed to the public through newspaper publication, television and radio broadcasting, etc., only the main message is displayed, and each report is presented to the public in an independent manner. The news text appeared independently, and the perception of the relevance of the topic mainly relied on the enumeration of related events in the text, the host's voice prompts and the public's internal logic to realize the active associative processing. Entering the Web2.0 era, the use of hypertext and hyperlink technology enhances the link between news texts and the perception of hierarchy. Hyperlink technology changes the linear narrative of traditional text with open and three-dimensional text encoding, and the new discourse is associated with the original text through hyperlink technology, which makes the meaning of news text continuously extended and enriched. [5] The single text display is transformed into a personalized search of mesh text, and the rapid correlation reading between news texts under the fingertip click becomes possible. The user's overall perception of the news event is optimized, and the perception ability is enhanced. However, the news text itself and its listing presentation under the hyperlink connection are still independent of each other, and the interlinking of text requires high subjective initiative of users, which cannot be realized independently.

Intelligent technology has changed this situation. Through automated information processing, AI technology is able to quickly capture the ever-present news reports in the database, filter and reorganize the facts according to the embedded algorithmic logic, and shape the public's overall perception of the event. Social media platforms represented by Weibo and Jitterbug are capable of presenting media reports while displaying reports on related or similar events after that report, quickly helping the public to build issue networks between issues. At the same time, through the display and listing of events associated with smart technologies, the platforms can help the media distribute the news text and at the same time connect the events in a chronological order or the development of the events, provide a pulse of the events, and sort out the evolution and public opinion development of a single event in time and from multiple perspectives, or a certain report. In addition, intelligent technology can filter out the related events of a news text through the reports and comments of media and users on an event, sort out similar events, help users connect different fragments of issues to shape their cognition of a certain type of event, strengthen or change their attitudes, and enhance users' social participation.

Relying on intelligent technology, the news text evolves from the listing of a single text to the combined presentation of multiple texts under the time chain tracing, which is of positive significance in coping with the public's information sorting obstacles under the news reversal. The development of social media platforms and mobile terminal technology has decentralized the voice of traditional media to ordinary users, and the massive and high-speed output of user-generated content has forced the media to improve the timeliness of the news and continuously reduce the time interval between news reports and events, so that the revelation of the truth has been characterized by staged disclosure and chain connection. Event reporting has changed from the authoritative release of professional media to the collective collaboration of media, users and other subjects, and personal expression has been integrated into public expression. However, compared with professional media, users lack corresponding professional training, and problems such as emotionalization and out-of-context quotes inevitably occur when publishing content. The process of truthfulness in the pursuit of timeliness and the emotional and fragmented expression of users have led to the frequent occurrence of news reversal. News reversal refers to the phenomenon of one or more significant changes or even reverse changes in the coverage of the same event in the Internet communication field. [6] Multiple reversals of events will erode the public's trust in the media and even the entire information environment. The public's resulting sense of deception, distrust, and perception of process

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truthfulness will place higher demands on the user's information literacy, which will inhibit the efficiency of their information processing. The combined presentation and intelligent sorting of multiple texts under time chain tracing can detach users from the complicated news texts and repeatedly changing statements, read the time vein with clear time axis and concise fact sorting, and reduce the pressure of information processing, so as to better recognize the facts.

3.1.2. The rising status of news visualization narrative

The development of intelligent technology has shaped the public's new reading habits and thinking logic while enriching the expression of news texts. Visualization is a way or means of presenting and disseminating information, and its ultimate goal is to obtain a better narrative effect than text and realize the optimal expression of information. [7] The application of artificial intelligence technology in the field of news production makes the visual narrative means of news text more diversified and richer in form, which can more and more satisfy the public's demand for multimodal perception of news. The visual narrative of news text can be divided into two categories: static visual narrative and dynamic visual narrative. Static visual narrative relies on static images, charts, infographics and other visual elements to convey information, mainly in data news, sports news and other news genres that rely on objective facts; dynamic visual narrative relies on 3D animation, video, interactive charts, etc. to achieve.

Intelligent technology has greatly broadened the boundaries of the application of visual narrative in news text, and dynamic visual narrative is on the rise. At present, dynamic visual narrative is mainly applied to the presentation of two types of news texts: one is the scene reproduction or scene simulation of disaster news. The reproduction of disaster scene realizes the restoration of the event scene through 3D animation, which is similar to the symbolic likeness mentioned by Peirce. Peirce explains symbolic likeness as "the substitution of a symbol for another because of its resemblance to a certain thing", and divides it into three non-exclusive levels: figurative likeness, diagrammatic likeness, and metaphorical likeness. [8] Among them, figurative likeness belongs to complete likeness, with the function of reproducing reality; metaphorical likeness adopts the form of 3D animation video, simulating actual objects with objects in animation, and is generally used when figurative likeness cannot be realized. [9] In the disaster news, image-based likeness is used to show the scene, and metaphorical likeness is used to restore the scene of the accident. Nanchang, Jiangxi Province, "1-8" major road traffic accidents, for example, the news media can not record the accident truck blind spot, rushed into the crowd of traffic, the need for 3D animation video form will be animated in the shape of the truck instead of the accident truck for the simulation of the accident occurred. Secondly, the scene analysis of the shooting and broadcasting of sports events. Compared with the simple graphical visualization expression used in ordinary sports news, sports news empowered by artificial intelligence, AR and other intelligent technologies presents the characteristics of immersion and strong sense of experience. Taking the 2024 Paris Olympics as an example, the head office used a variety of AI-assisted filming means in the production of public signals for the Paris Olympics, including the AI-enhanced webcam system in the badminton event, the three-dimensional model tactical analysis system in the rock-climbing event, and the AI screen slicing system in the gymnastics event. [10] Meanwhile, when broadcasting table tennis events, the 3D motion capture technology and AR special effects rendering engine can realize the acquisition of motion trajectory and posture without sensor wear, and present the rotational speed, landing point and trajectory special effects of table tennis balls in the game. The presentation of sports event broadcasting and reporting is more dependent on the dynamic visualization narrative in the human-computer symbiosis state, thus providing a richer and more immersive viewing experience.

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3.2. Sensing emotions: intelligent presentation of the opinion environment

Traditional journalism requires a separation of fact from opinion. In addition to the factual nature of the story itself, the format must show the news' own tendencies by using direct quotes to describe the facts, etc. [11] News reports cannot directly present the reporter's own subjective attitudes and tendencies, and opinions and viewpoints must be presented intelligently. News reports cannot directly present the reporter's own subjective attitudes and tendencies, and the expression of opinions and viewpoints needs to be accomplished through quotes from the people involved in the news, the people concerned. The public need to rely on their own information processing, perception of stereotypes to perceive the mainstream opinion, clear opinion climate. In the era of intelligent communication, news reports still adhere to the principle of objectivity, requiring reports to be objective and neutral, and the facts of the report itself still need to be separated from opinions. However, compared with traditional news reports restricted to a single newspaper page of a single news report presentation, news reports in social media platforms are able to aggregate media, reports, the public, and opinions through the words, realizing the objective presentation of media reports and the subjective feedback of public opinion co-presentation, and not the public constructed an intelligent and intuitive presentation of the opinion environment.

In the first half of 2024, Weibo launched its own AI module, Weibo Intelligent Search Beta, with "insight into public sentiment and capture typical views" as its publicity concept. This function is able to quickly analyze professional and user-generated content under a certain term on the platform, summarize the facts, extract popular keywords and give a summary of typical opinions on the platform. Under a specific term, Weibo provides popular posts from media and users to inform users of basic facts. At the same time, users can click on WiseSearch Analytics to access the event overview and opinion board content provided by AI for users. While reiterating the basic facts and refining key information, Wisdom Search AI provides users with public sentiment analysis, discussion word clouds and typical opinions in the opinion section. Among them, the popular sentiment analysis summarizes and refines the six main emotions of users under the words according to the content posted by users, and displays them in bar charts; the discussion word cloud is visually highlighted according to the frequency of keywords; and the typical viewpoint is to quickly screen the popular and typical views among the many related texts, providing users with intuitive attitudes towards the facts. Based on this, the media realizes the output of the information layer and opinion layer of the news report, and provides users with a visual and intuitive opinion environment under the factual report on the basis of insisting on the separation of fact and opinion in the report itself.

The co-occurrence of objective presentation of media reports and subjective public opinion feedback may become a major trend in the presentation of news texts under the empowerment of intelligent technology. In the information environment where the exponential growth of information seriously exceeds the public's information perception and processing capacity, the information on events provided by the media and users is quickly summarized by AI, and summarized into the main facts of the condensed synopsis, which reduces the user's information processing pressure to a great extent. The public sentiment analysis, discussion word cloud and typical opinions in the opinion layer provide an intuitive and visualized opinion environment in the digital space, which can help users quickly understand the majority's views and attitudes towards the relevant events. The dual perception of "facts + opinions" can help the public better recognize social events, and the exchange of opinions and emotions will also promote the achievement of social consensus. Meanwhile, studies have shown that the improvement of social-emotional competence (the ability to accomplish desired social goals through cognition, action, and emotion, as well as the ability to understand and perceive their own and others' emotions) plays a central role in promoting the social participation behavior of "Generation Z" youth, who are the main participants of the Internet. [12]The news text presentation

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feature of "basic facts at the information level" and "emotional analysis at the opinion level" has a positive effect on the public's social expression.

However, at the same time, the co-occurrence of the public's subjective opinions and the media's objective reports also carries certain risks. The development of new media platforms has provided users with convenient channels to express their opinions, but they lack systematic and professional training in content processing and output, and the level of their media literacy inevitably varies. In the absence of media literacy, public participation in the communication chain of the platform is very likely to contribute to the vicious or hot events continue to ferment in the public traffic domain or even flow to a larger public traffic domain, resulting in a bad impact. [13] In particular, the co-occurrence of subjective public opinions and objective media reports can easily lead to the phenomenon of the public's partiality between the "information layer" and the "opinion layer". Under the inertia of emotion-oriented information processing, the public gives priority to reading the public's emotional analysis and typical viewpoints, and is easily misled by wrong and extreme attitudes and tendencies, thus affecting the public's comprehensive perception and correct judgment of the facts. How to make the technology based on human values and judgment, quickly and efficiently display the correct facts and typical views that meet the expectations of the public and society is a major direction for the refinement of intelligent technology.

4. Temporal Anxiety: The Interaction between Perceived Anxiety and the Pursuit of Timeliness

The rising value of news timeliness further affects practitioners' perception and definition of timeliness in the rapid generation of content, and the reconceptualization of timeliness creates corresponding temporal anxiety among actors. The "time" that triggers temporal anxiety is not one-dimensional, but multidimensional, and can serve as a contextual framework that constrains actors, as well as a resource for them to use. [14] Artificial intelligence technology, with its superior information gathering and text processing capabilities, is able to form news texts and broadcast news in a fraction of a second. The time between events, information gathering, and text generation is constantly being compressed, the timeliness of news is increasing, and journalism is becoming more and more in line with the accelerated society. Social acceleration suggests that accelerated time frames create an atmosphere of time panic, which in turn creates an experience of time pressure for actors, which is reflected in individual psychological levels of time anxiety. [15] The compressed "time" between the event and the production of the content, and the resultant increased timeliness of the compressed time, can be an important source of perceived time anxiety when actors engage in such activities again, as a result of the use of smart technologies for content production.

Rosa argues that social acceleration leads to social alienation in the form of spatial alienation, physical alienation, action alienation, temporal alienation, self-alienation and social alienation. [16] The compressed time through intelligent technology will in turn shape the perception and thinking of the actors, and continuously enhance their perception and pursuit of the timeliness of the action, and at the same time, this effect is characterized by a strong irreversible feature. That is, once the generator of news text accepts this compressed time, he will no longer be able to treat the original time lag with the mentality of the past. Thus, the actor tends to chase this time lag and shorten it further on the basis of it. As a result, when facing the situation where intelligent technology is applied to the output of news text to improve the timeliness of news at a high speed, the actor will perceive the atmosphere of time panic in this time frame, and "every second counts" becomes the basic requirement for news text to cope with the change of the information environment, and the time-based anxiety arises and intensifies continuously. However, this time anxiety in turn also urges the actors to work towards a shorter time lag, and "faster" becomes the concept that news texts are constantly chasing. In this way, the role of intelligent technology in the production and presentation of news texts makes actors in an

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accelerated society also face the time anxiety brought about by "accelerated news", and the perception of anxiety then borrows technology to enhance the time lag, and the enhancement of the time lag once again strengthens the actors' understanding of the importance of the time lag and the perception of anxiety, which is characterized by the cyclical nature of the cycle.

5. Conclusion

The co-occurrence of "basic facts at the information level" and "emotional analysis at the opinion level" has not only ushered in a new paradigm in the presentation of news texts, but also greatly facilitated the content consumption of users in the era of information overload. The exponential growth of information has long exceeded the ability of individuals to receive and process information on their own, bringing the public a sense of loss of control over information consumption. In particular, the truth is no longer determined by professional media as in the era of traditional media, but is presented in the process of flow through the stage of truth, the phenomenon of news reversal frequently occurs and seriously interferes with the public's perception of the facts, making the public opinion space generalized information anxiety, cognitive dissonance and crisis of trust, and curbing the public's enthusiasm for social participation. The chain time tracing and vein analysis of basic facts in the information layer can effectively alleviate the information processing pressure of users, and help the public construct an overall perception of facts with more intuitive linear thinking. At the same time, the sentiment analysis of the opinion layer actually helps the public to perceive the opinion climate in a more intuitive way and provides a framework for text interpretation. Gestalt psychology assumes that individuals will feel uneasy if there is no appropriate interpretive framework for information, and thus public opinion or other people's judgment will be used as a reference. [17] The presentation of public sentiment analysis and typical opinions fills the anxiety and tension of individuals who are unable to make independent judgments and interpretations in the face of information, and helps them to determine their own opinions and thus better communicate and interact and participate in society.

However, the application of intelligent technology in the public sentiment analysis of public opinion events has in fact neglected the individual's initiative and subjectivity in the perception of opinion climate to a certain extent. Summarizing and extracting the main emotions of users according to their posted contents is actually assuming that the public can definitely convey their variable and subtle emotions through language, and that intelligent technology can accurately perceive their subjective emotions from their textual expressions. However, the likelihood that both the user and the technology will be able to fulfill this expectation is currently low. First, the language expression ability of individuals is constrained by various factors such as education level, cultural literacy, information perception ability, etc., and not all participants can accurately express their own views and attitudes; second, intelligent technology is always unable to accurately perceive the complex emotions and rhetorical art of the human subject when expressing information. For example, when users participate in social expression, their playful and eccentric expressions carry the meaning of teasing and flirting, and are often intended to achieve the purpose of irony. However, the high-context culture of Chinese expression places certain limitations on the play of technology, and intelligent technology currently has difficulty in recognizing whether a user is engaging in serious expression or sarcastic, reverse expression. As a result, the analysis of public sentiment prompted by it may not be able to represent the main attitude adopted by the public towards a certain event, the filtering and reorganization of typical views may have the problem of being taken out of context, and the opinion environment prompted by it to the public may interfere with the public's judgment. Users' own information literacy and critical thinking are also crucial to the realization of the expected news text presentation, in which "basic facts at the information level" and "emotional analysis at the opinion level" coexist.

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Technology has its own internal development logic, but in the development process there will be a certain gray area that creates risk problems. However, it is undeniable that the development and application of intelligent technology has changed the shape of the news text presentation, so that it is due to the media's objective reports and the public subjective feedback organic combination of the overall information environment has played a role in dredging, so that the user's ability to process information has been significantly improved. To assess the impact of technology on the presentation of news texts, it is not possible to use a simple "good or bad" to evaluate. Under the condition that technology does not deviate from the correct value track, applying and improving technology with an inclusive and open mind can help the press realize multi-dimensional presentation and multi-modal perception of facts in the era of intelligent communication, and better promote the achievement of social consensus.

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